

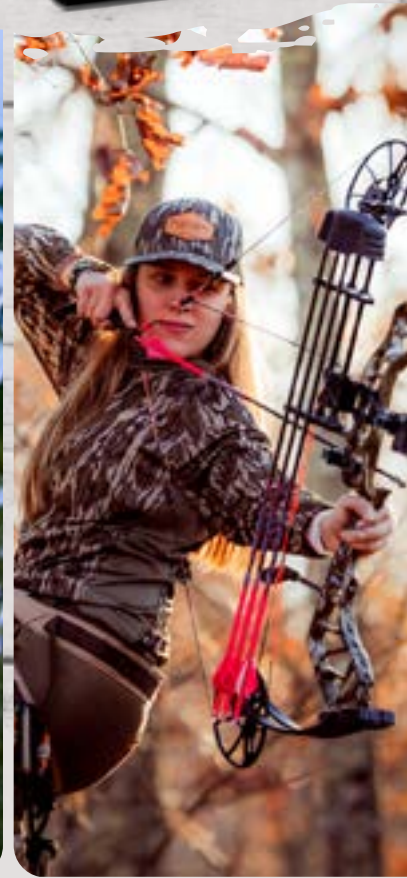
MISSOURI CONSERVATIONIST

VOLUME 86, ISSUE 2, FEBRUARY 2025
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Bald eagle

MISSOURI CONSERVATIONIST



ON THE COVER

Night falls over a wetland at Duck Creek Conservation Area

DAVID STONNER

16–35mm lens, f/3.5
30 sec exposure, ISO 800

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MISSOURI
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DECEMBER'S ISSUE

The photos are breathtaking. By these photographers sharing their individual perceptive eye, they grant us such a generous gift. Thank you!

Lynn Ricci
via email

FINDING HOPE IN CONSERVATION

I had been deleting old stuff off my cell phone and came across numerous keepsakes from where I lived on Bull Creek in rural Christian County. I was struck in particular by a recording I'd made of whip-poor-wills, Chuck-will's-widows, and three or four frog species, all singing at night. The recording was made as recently as 2022, and I haven't heard a nightjar since.

I have a granddaughter now, and I see environmental changes that my own grandmother was reflecting on before she died years ago. I am struck by the evolving modernity of our society, and that so many people have no idea what they're missing. How the world is changing and it is unlikely that we'll get back the things we've lost. I wonder if my granddaughter will ever hear a whip-poor-will.

So, I was thoroughly depressed when I cracked open the December *Conservationist*. You pointedly mentioned "how you can help" North American birds, both in the *Nature Lab* article and regarding the Christmas Bird Count. Your director summed up my feelings nicely with his discussion of the word "awe," which is what I feel when I reflect on this fortunate planet of ours.

Thanks for fighting the good fight, MDC. You gave me hope.

Lawrence Ireland Fair Grove

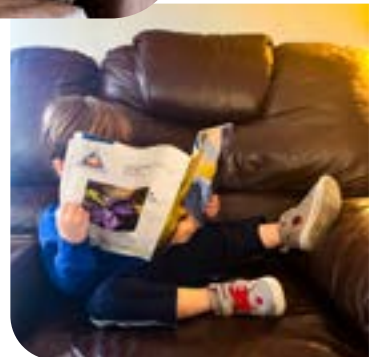


START THEM YOUNG

My 18-month-old grandson (top photo) loves your magazine. The December issue is his favorite with all the photos of animals and birds.

We read it often and he even picks it up and goes through it himself. Just shows you all ages relish your publication.

Kathy Crow Hillsboro



My 3-year-old grandson (bottom photo) loves to look through your magazines. It gives us joy watching him look at the wonders of Missouri outdoors.

Geoff Crosby via email

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Have a Question for a Commissioner?

Send a note using our online contact form at mdc.mo.gov/commissioners.

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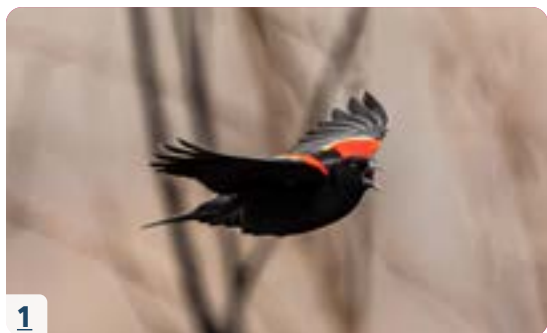
Ray
Wagner Jr.

The Missouri Department of Conservation protects and manages the fish, forest, and wildlife of the state. We facilitate and provide opportunity for all citizens to use, enjoy, and learn about these resources.



Want to see your photos in the *Missouri Conservationist*?

Submit your photos online via
[flickr.com/groups/mdcreaderphotos-2025/](https://www.flickr.com/groups/mdcreaderphotos-2025/),
mdc.mo.gov/magazine-reader-photos/,
or by emailing readerphoto@mdc.mo.gov

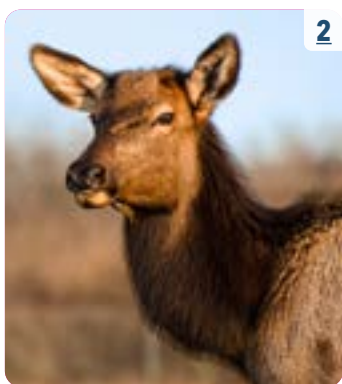


1

1 | Red-winged
blackbird by
Bryce Stroup,
via website
submission

2 | Elk by **Dean
R. Specker**,
via website
submission

3 | Sunrise
by **Landon
Hodges**, via
Flickr



2



3



Want another chance to see your photos in the magazine?

➔ In the December issue, we plan to feature even more great reader photos. Use the submission methods above to send us your best year-round pictures of native Missouri wildlife, flora, natural scenery, and friends and family engaged in outdoor activities. Please include where the photo was taken and what it depicts.



Up Front

✱ Our Missouri Department of Conservation logo was adopted in June 1970. Drawn by acclaimed MDC artist Charles Schwartz, the triangle containing an oak leaf, bass, and raccoon has become a recognizable symbol of conservation in the state. Many often ask why the raccoon was chosen for the logo, as opposed to the white-tailed deer or wild turkey. The raccoon reflects the long history and influence of trapping and fur trading in Missouri. Early pioneers sought raccoons and beavers as sources of fur and food. With Missouri at the convergence of the two great rivers, the fur trade played a huge role in shaping the lives of those who colonized Missouri (see *Built on Fur*, Page 16).

For me, some of my earliest outdoor memories were times spent with my dad trailing our coonhounds through the dark Ozark woods in pursuit of a raccoon. We'd pause at a downed tree to sip on a can of tomato juice and listen to the dogs run with the light of a carbide lamp. In the days before the local fur buyer arrived, we'd pull the hides that had been neatly rolled and stored in bread bags from the freezer. These times had a lasting and significant impact on me and helped create the desire to pursue a career in conservation. So, while some today may not have such a positive view of raccoons, they have shaped our great state and me.

JASON SUMNERS, DIRECTOR
JASON.SUMNERS@MDC.MO.GOV

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SPECIES OF CONSERVATION CONCERN

Watching Out for Tiny Tim

MDC staff monitor geocarpon, a rare plant found in some Missouri glades

by Dianne Van Dien

✳ **Geocarpon** (*Geocarpon minimum*) is a rare succulent that grows no taller than 1½ inches. Also called earth fruit or tiny Tim, it is federally threatened. In Missouri, it is state endangered and found only in sandstone glades. And “not just any sandstone glade,” says State Botanist Malissa Briggler, “but channel sandstone glades.”

Channel sandstone contains high amounts of magnesium and sodium. Many plants find the resulting salty soil along with the rocky conditions of the glades inhospitable, but for geocarpon, these glades are ideal. Adapted to the shallow, sandy soil, it grows well there, in part because most other plants can’t, which means less competition.

Briggler and other MDC biologists regularly survey for geocarpon, reporting their findings to the U.S. Fish and Wildlife Service, which reviews the plant’s status every five years.

“It’s not a long-lived plant,” Briggler says. “You have this narrow window to catch it whenever you’re



Related to pinks and carnations, geocarpon is a tiny succulent that blooms from mid-March to early May. Its green flowers may be mistaken for leaves.

surveying. After it flowers and produces seed, it dies and turns this rusty red color. And sometimes that helps you to pick it out.”

Assessing the health of geocarpon populations can be tricky because the plant’s numbers can fluctuate wildly from year to year.

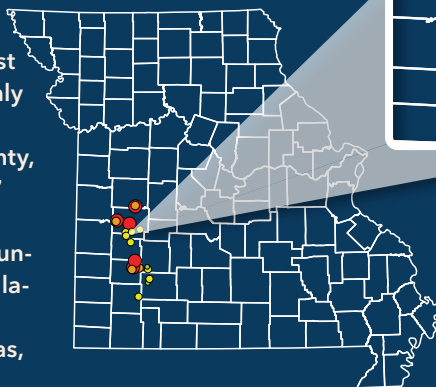
“If it’s been a dry winter or a late spring, we can go out and hardly find any at all,” Briggler explains. “But that shouldn’t be counted as the population declining. Not just after one year. It could have just been a bad year, and then the following year, there’ll be just a flush of it.”

Within the last few years, MDC biologists have found three new populations in St. Clair County. When geocarpon was first described in 1914, only one population was known. Today about 27 populations are known in the state.

“Our populations do appear to be stable,” Briggler says, “So, as long as we’re managing the glades well, and keeping them open from getting too much encroachment by cedar and other woody plants, we’ll be able to manage the geocarpon pretty well.”

At a Glance

When geocarpon was first described in 1914, the only known population in the world was in Jasper County, Missouri. Today about 27 populations are known across seven Missouri counties, and additional populations have been found in Arkansas, Louisiana, Texas, and Oklahoma.



The size of the dots represents the health and stability of the geocarpon population; the larger the dot, the more robust the population is.



After geocarpon flowers and seeds, it turns a wine-red color.

In Brief

News and updates from MDC

CATCH-AND-KEEP TROUT SEASON STARTS MARCH 1

MISSOURI'S FOUR STATE TROUT PARKS ARE EXPECTED TO DRAW LARGE CROWDS

➔ March 1 marks the annual opening of catch-and-keep trout fishing in Missouri at the state's four trout parks: Bennett Spring State Park near Lebanon, Montauk State Park near Licking, Roaring River State Park near Cassville, and Maramec Spring Park near St. James. The catch-and-keep season at the trout parks runs through Oct. 31.

MDC operates trout hatcheries at all four parks and stock rainbow trout daily throughout the season. MDC staff stock more than 800,000 trout annually at the state's four trout parks and approximately 1.5 million trout annually statewide.

Trout anglers need a daily trout tag to fish in Missouri's trout parks during this time. Daily trout tags can only be purchased at each of the four trout parks. MDC encourages trout anglers to have the correct amount of cash for daily tags, if possible. Missouri residents 16 through 64 and nonresidents 16 and older also need a fishing permit in addition to the daily trout tag.

The cost of a daily trout tag is \$5 for adults and \$3 for those 15 years of age and younger. A daily fishing permit is \$9. The daily limit is four trout.

MDC encourages trout anglers to buy their fishing permits ahead of time from numerous vendors around the state, online at mdc.mo.gov/buypermits, or through MDC's free mobile apps, MO Hunting and MO Fishing, available for download through Google Play for Android devices or the App Store for Apple devices.

For more information on trout parks, visit short.mdc.mo.gov/4cw.



Dedicated anglers braved the cold to attend Montauk State Park's opening morning of trout season in 2009.

Missouri has a wealth of trout waters, including red, white, and blue-ribbon areas that support naturally reproducing trout.

MDC also offers the Missouri Blue Ribbon Trout Slam to honor anglers who catch a trout in at least five of the nine blue-ribbon trout streams. Participants can have their successes listed on the MDC website. Learn more at mdc.mo.gov/troutslam.

For more information on trout fishing in Missouri, visit short.mdc.mo.gov/Zvy. Get the information in booklet form with our new *Trout Fishing in Missouri*, available for free at MDC locations or order one online at short.mdc.mo.gov/4fk.

To prevent the spread of the invasive alga called didymo or "rock snot," the use of shoes, boots, or waders with porous soles of felt, matted, or woven fibrous material is prohibited at all trout parks, trout streams, Lake Taneycomo, and buffer areas. Get more information at short.mdc.mo.gov/4ZA.

DEER AND TURKEY HUNTING SEASON DATES SET

MDC recently set deer and turkey hunting season dates for the 2025–2026 seasons, which were approved by the Missouri Conservation Commission at its Dec. 13 open meeting at the MDC St. Louis Regional Office in St. Charles.

The commission also gave initial approval to recommendations related to chronic wasting disease (CWD) that would rescind the intrastate carcass transportation regulations for deer and other cervids and establish carcass-disposal requirements for deer and other cervids harvested in Missouri.

2025 Spring and Fall Turkey Hunting Dates

- Spring Youth Portion: April 12–13
- Regular Spring Turkey Season: April 21–May 11
- Fall Archery Turkey Portion: Sept. 15–Nov. 14 and Nov. 26–Jan. 15, 2026
- Fall Firearms Turkey Portion: Oct. 1–31 (in open counties)

2025–2026 Archery Deer Hunting Dates

- Sept. 15–Nov. 14 and Nov. 26–Jan. 15, 2026

2025–2026 Firearms Deer Hunting Dates

- Firearms Early Antlerless Portion: Oct. 10–12 (in open counties)
- Firearms Early Youth Portion: Nov. 1–2
- Firearms November Portion: Nov. 15–25
- Firearms CWD Portion: Nov. 26–30 (in open counties)
- Firearms Late Youth Portion: Nov. 28–30
- Firearms Late Antlerless Portion: Dec. 6–14 (in open counties)
- Firearms Alternative Methods Portion: Dec. 27–Jan. 6, 2026

Recommendations for changes to firearms antlerless permit numbers, CWD mandatory sampling, conservation area regulations, managed hunts, and other proposals will be submitted to the commission for consideration this spring.

Detailed information on the upcoming seasons and portions will be included in the *2025 Spring Turkey Hunting Regulations and Information* booklet and the *2025 Fall Deer & Turkey Hunting Regulations and Information* booklet, available closer to the seasons. The booklets will be available where permits are sold and online at mdc.mo.gov.

Ask MDC

Got a Question for Ask MDC?

Send it to AskMDC@mdc.mo.gov
or call 573-522-4115, ext. 3848

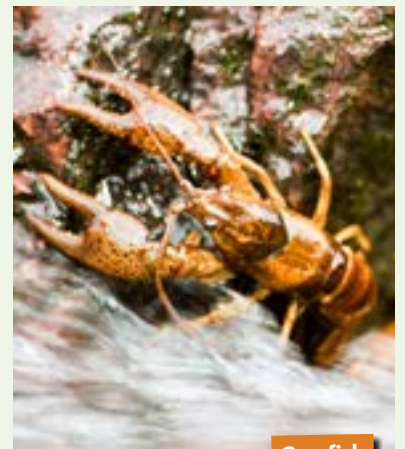
Q: I was at Klepzig Mill last February, and we noticed five or six crayfish climbing up a waterfall from a lower pool. The rock face was nearly 6 feet tall. Do crayfish climb like this for spring mating or for some other purpose?

➔ MDC's staff have observed this same crayfish behavior firsthand. Former MDC Scientist Bob DiStefano, now retired, also witnessed the same event during the spring at Rocky Falls, Missouri's tallest waterfall near the Current River.

"It is now apparent to me this phenomenon is actually a real and reoccurring natural event for crayfishes, at least in our Ozark streams," DiStefano said, noting that most of the reports have occurred in spring.

Why these crayfish are on the move remains a mystery to science — for the time being. DiStefano thinks the movement might be linked to feeding or reproduction, or both. It's possible egg-carrying females "migrate" to ensure their progeny are dispersed for the purpose of genetic mixing.

"We have some telemetry tracking data from some Ozark stream crayfish in the St. Francis River drainage, showing that they do move fairly good distances," DiStefano said. "I



have also heard reports of large numbers of crayfish crossing roads at low-water stream crossings, appearing to migrate upstream. But honestly, I don't have a confident opinion of what we're observing. There are so many cool and fun natural events going on that we don't even know about yet."



North American river otter

Q: Three times over the course of our four-day float on the Eleven Point River last January, I encountered otters swimming alongside my canoe, dolphin-like, occasionally doing flips. It seemed they might be begging for food. Do river otters beg for food on this river?

➔ Of all the mammals, otters are particularly playful and curious. When in the water they tend to be the most relaxed mammal, since few if any other predators can catch them.

"I have heard of otters approaching canoes and kayaks out of curiosity since they likely would not view boats as a risk. But I have not heard of otters begging for food," MDC Scientist Nathaniel Bowersock said. "My guess is your float was well timed with these otters patrolling their usual fishing spots, and you both were using the same parts of the river at the same time."

During winter, otters feed almost exclusively on fish. However, crayfish make up a large portion of their diets during other seasons. While the fishing habits of otters do not endear them to anglers, it must be realized otters eat rough as well as game fish and take many other kinds of food, including mussels, frogs, turtles, aquatic insects, and other small animals. They use their whiskers to feel around underwater to find food. Research suggests that they have minimal impacts on fish populations in large streams, rivers, and lakes but may impact fish populations in small streams and ponds. If you are experiencing difficulties with river otters, please contact MDC for guidance on how to better control them.

For more information about Missouri's North American river otters, visit short.mdc.mo.gov/4kS.



Clarissa Stroder

BUTLER COUNTY
CONSERVATION AGENT

offers this month's

AGENT ADVICE

The Light Goose Conservation Order begins on Feb. 7. During this season, hunters can harvest snow, blue, and Ross's geese. A Conservation Order Permit is required, and there are no daily bag or possession limits. Hunters must use shotguns, 10 gauge or smaller, which may hold more than three shells. All shot must be lead free. Light geese tend to congregate in open fields, so be aware of your location and have permission before hunting on someone's property. White-fronted geese tend to sit with or near these geese, but they are not included in the season. For more information, check the *Migratory Bird and Waterfowl Hunting Digest 2024–2025* wherever you buy your permits or online at short.mdc.mo.gov/4Hk.

What IS it?

Can you
guess this
month's
natural
wonder?

*The answer is on
Page 9.*



INVASIVE SPECIES

MISSOURI'S LEAST WANTED

Invasive nonnative species destroy habitat and compete with native plants and animals. Please do what you can to control invasive species when you landscape, farm, hunt, fish, camp, or explore nature.



Curly-leaf pondweed

Curly-Leaf Pondweed

by Angela Sokolowski

Curly-leaf pondweed (*Potamogeton crispus*) is an invasive submerged aquatic perennial plant that can infest ponds, lakes, and streams. This species can be identified by its wavy — or curly — alternate leaves with finely toothed margins and flattened stems. The growth period differs from most aquatic vegetation. Growth starts in fall and continues through winter, even under ice, and is often the first aquatic plant noticed in spring. By mid-summer, it dies back and may wash ashore, decomposing.

Why It's Bad

This species can displace beneficial aquatic plants, form dense mats at the water's surface, and interfere with fishing, swimming, and boating activities. Plant fragments can regenerate new individuals. It can easily be spread by boats and trailers, so "Clean, Drain, and Dry" watercraft and gear before transporting to prevent spreading this weed.

How to Control It

Mechanical: Pulling or raking can temporarily clear away dense mats but may unintentionally distribute plant parts that establish new populations.

Chemical: Several aquatically approved herbicides are commercially available to treat this species. Consult a professional for guidance on proper treatments. Never use unapproved herbicides in surface waters.



To learn more, visit short.mdc.mo.gov/4HJ

DEER CARCASS MOVEMENT AND DISPOSAL

The Conservation Commission gave initial approval for rescinding the intrastate deer carcass transportation regulations that prohibit high-risk parts of hunter-harvested deer and other cervids from being moved from CWD Management Zone counties unless being delivered to a licensed meat processor, licensed taxidermist, or CWD sampling station.

In its place, the commission gave initial approval for establishing statewide requirements for the disposal of carcasses of deer and other cervids harvested in Missouri. MDC recommended allowing hunters who harvest deer in any county in Missouri to be able to transport the carcass, including all parts, to any final destination in the state for processing as long as unused parts are disposed of in a landfill, through a trash service, or on the property where the animal was harvested. Hunters would be required to report their deer through Telecheck before any parts are transported out of the county of harvest.

According to MDC, these changes were recommended to slow the spread of CWD, minimize regulatory complexity, and reduce the burden on hunters to comply with regulations.

"Improper disposal of deer carcasses can spread CWD, threatening Missouri's deer population," said MDC Cervid Program Supervisor Jason Isabelle.

He noted the current intrastate carcass transportation regulations required hunters who process their own deer to debone or quarter the animal prior to leaving a CWD Management Zone.

"This can be challenging for hunters who harvest deer just before dark or in inclement weather," said Isabelle. "The carcass disposal regulations would still allow a hunter to take their deer to a taxidermist or processor as they normally would. And if they process deer themselves, these changes will allow them to take their entire deer home to process it as long as the unused parts are either disposed of in a landfill, through a trash service, or left on the harvest property."

MDC did not recommend changes to the carcass transportation regulations for cervids harvested outside of Missouri. These regulations prohibit the transportation of high-risk cervid parts into Missouri, from cervids harvested out of state, except that hunters may import cervid heads with cape attached if delivered to a licensed taxidermist within 48 hours of entering Missouri.

MDC will take public comments on the regulation changes from Feb. 19 through March 20, 2025, at short.mdc.mo.gov/Z49.

MDC will compile comments received and share them with the commission prior to their April 4 open meeting when final consideration will be given to the regulation changes. If approved, the changes would become effective June 30, 2025.



BUY 2025 HUNTING AND FISHING PERMITS

Annual hunting and fishing permits expire at the end of February, including 2024 permits for small game, fishing, trout fishing, and combination hunting and fishing.

Buy Missouri hunting and fishing permits from vendors around the state or online at mdc.mo.gov/buypermits. Once purchased, permits may be carried electronically through our free mobile apps, MO Hunting and MO Fishing, available for download through Google Play for Android devices or the App Store for Apple devices.

Save time by buying hunting and fishing permits for multiple people in a single transaction. Select the *Additional Customer* option during the permit purchase.

Try our online permit auto-renewal service to automatically renew your permits prior to the start of the next season or permit year so you never have an expired permit when you need it most. Enrollment in auto-renewal can be done during an online permit purchase or by using the *Manage Your Account* feature.

Commercial and lifetime permits can be purchased only through the MDC Permit Services Unit by calling 573-522-0107 for an application.

WHAT IS IT? EASTERN RED BAT

The eastern red bat resembles a mouse with wings. The wings are thin and leatherlike, stretched across the bat's limbs and fingers and attached to its sides, allowing it to glide in flight. Missouri is home to 14 species of bats, most of which belong to the evening bats, or Vespertilionidae, family. They are nocturnal, taking to the skies at night to hunt for flying insects.







TO KEEP OR RELEASE?

THAT IS THE QUESTION, AND THE ANSWER
HAS LOTS OF SAFETY CONSIDERATIONS

by Andrew Branson

Once you catch a fish, you have a decision to make — are you going to keep it or release it? Whether you decide to keep or release it, proper fish handling comes into play, and it is all about safety — your safety as well as the safety and health of the fish.

When releasing a fish, it is important to take steps to reduce stress on the fish, maintain the health of the fish, and lessen catch-and-release mortality.

Sometimes there is not a decision to be made. Some fish simply must be released after they are caught. Seasons, length limits, and daily limits are just a few regulations that may require a fish to be released immediately. Part of being a responsible angler is staying mindful of the regulations that dictate methods for fish harvest and returning a fish to the water alive when required.

CHOOSING EQUIPMENT

Choosing the right equipment when fishing is important. Fish that strike artificial baits have a higher survival rate because they are less likely to be hooked deep enough to damage vital organs, so it's best to use artificial lures instead of live bait, especially for catch-and-release fishing.

Squeeze hook barbs flat with pliers or file them off. Barbless hooks reduce the risk of causing serious wounds.

Use a landing net large enough to handle your fish safely. Nets made of soft, woven, knotless nylon or rubber are preferred.



MEASURING YOUR CATCH

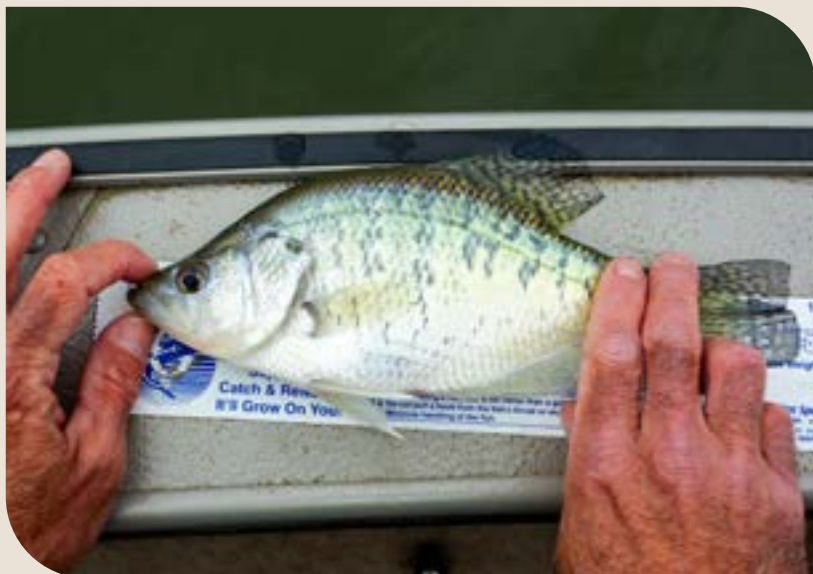
Learn to measure and identify the fish you catch so that you can abide by Missouri's fishing seasons, daily limits, length limits, and other regulations. When in doubt about a fish's legal length, play it safe and immediately return the fish to the water unharmed.

To measure a fish:

- Place the fish on a ruler. Make sure the fish is laid flat on its side.
- Close the fish's mouth.
- Squeeze the lobes of the fish's tail fin together.
- Measure a straight line from the tip of the snout to the tip of the tail lobes.

While this technique works for most game fish, some fish are measured differently. For example, paddlefish are measured from the eye to the fork of the tail. Sturgeon are measured from the tip of the snout to the fork of the tail.

Any fish below the legal minimum length must be returned to the water unharmed immediately after being caught.



REDUCING FISH STRESS

Don't let your leisure activity become a source of stress for the fish you are pursuing.

If you're using live bait, set the hook at the first sign of a bite so the fish is less likely to swallow the bait. On rod and reel, don't play a fish any longer than necessary.

Check setlines frequently to improve survival of released fish. In the summer, keep setlines positioned above the thermocline — or the transition zone between surface water and deep water. Never set them in deeper water where the oxygen concentrations are lower.



REVIVING A TIRED FISH

An exhausted fish may have little energy to swim away when released. There are some things you can do to potentially revive a fish before releasing it.

- Hold it upright in the water by grasping its tail with one hand while supporting its belly with the other.
- Gently move the fish back and forth below the water's surface. This allows oxygenated water to flow over the gills.
- When the fish is revived, release your grip and allow it to swim away.

HANDLING FISH CAREFULLY

If you plan to release your catch, continuous moisture is key. Wet your hands and any other dry surface a fish may touch. This will protect the fish's slime coat, which guards it from infection and improves its survival. Keep the fish in the water as much as possible while removing the hook.

Hold large fish by the lower jaw with one hand and cradle the heavy body with the other. It may be best to have another person remove the hook. Always carry a hook disgorger or needle-nosed pliers. Back the hooks out if possible.

Cut the line as close to the hook as possible if the fish is hooked deeply in the gills or stomach. The hook will fall out after a time, with minimal harm to the fish.

Avoid teeth by grasping fish over the gill covers. Never put your fingers in the eye sockets or gills and do not lift the fish by the gill covers.

Always be gentle. Squeezing the fish can cause damage to vital organs.

MINIMIZING EXPOSURE TO AIR

A good rule-of-thumb is to keep the fish out of water no longer than you can hold your own breath. Be especially mindful during freezing temperatures, which can be damaging to the gills, eyes, and other sensitive areas of a fish. If you are going to take a picture with your catch, do so quickly.

Finally, always release endangered fish unharmed immediately. Pallid sturgeon and lake sturgeon are the endangered fish species that anglers are most likely to catch.

NAVIGATING BUOYANCY PROBLEMS

Most fish have an internal swim bladder that is used to maintain buoyancy. Bringing fish up quickly from depths greater than 30 feet can cause barotrauma and increase fish mortality.

Due to physiological differences, some fish species, such as trout, gar, and catfish, can prevent barotrauma. Other



fish species cannot and exhibit symptoms of barotrauma such as bulging eyes, bloody fins due to ruptured blood vessels, protruding stomach from the mouth, or remaining "belly-up" at the water's surface.

To help reduce the likelihood of barotrauma, fish waters no deeper than 30 feet and reel fish in slowly, giving them time to depressurize.

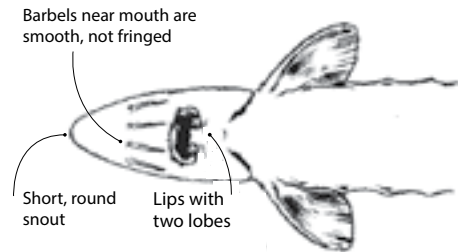
IDENTIFYING ENDANGERED SPECIES

Missouri is home to three species of sturgeon — lake, pallid, and shovelnose. Pallid sturgeon and lake sturgeon are endangered fish species that anglers must release unharmed immediately. This guide will help sort out the three species.



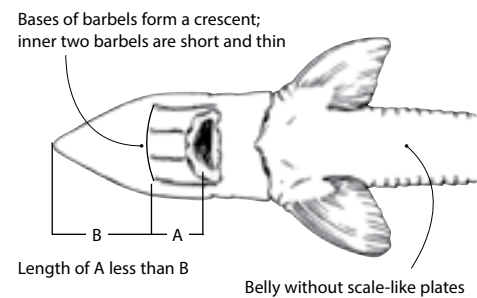
LAKE STURGEON (ENDANGERED)

- Sides and back range from dark slate to light brown or yellowish olive; white belly
- Found throughout the Missouri and Mississippi rivers and its tributaries
- May reach 8 feet and more than 300 pounds



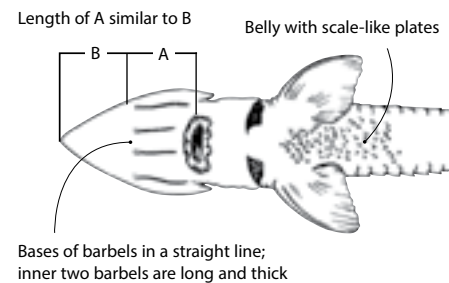
PALLID STURGEON (ENDANGERED)

- Grayish white
- Found in the Missouri River and in the Mississippi River downstream from the mouth of the Illinois River and its tributaries
- May exceed 30 inches and reach 10 pounds or more



SHOVELNOSE STURGEON

- Reddish brown or buff
- Found throughout Missouri and Mississippi rivers and their tributaries
- Rarely exceed 30 inches or 5 pounds



Lake sturgeon



Pallid sturgeon



Shovelnose sturgeon



RECOMMENDATIONS FOR TOURNAMENTS

Tournaments can mean long days on the water. Keep fish in livewells until all participants leave their boats. At weigh-in, use only three to five organizer-provided weigh-in baskets. A series of light colored, clean, 50-gallon plastic garbage cans of lake water should be spaced every 10 feet up to the scales so that baskets of fish can be kept in water until the actual weigh-in. The water in these cans must be kept cool, fresh, and aerated.

Provide proper water conditions in the post weigh-in holding tank by using continuous aeration and maintaining recommended temperature and salt concentrations.

Assign people to coordinate fish release. Choose release sites with relatively cool, clear, deep water. At the time of release, fish should be classified as releasable or non-releasable. Dead, weak, or injured fish should be considered non-releasable.

Three to five days after the release, check every release area and remove any dead fish. The tournament should not be considered over until this has been done.

Consider refereed or geo-referenced photographic tournament formats. Nearly immediate release after recording increases fish survival.

A complete guidebook for tournament anglers and organizers can be found at:

- B.A.S.S.: short.mdc.mo.gov/4YY
- Shimano: short.mdc.mo.gov/4Yr

MAINTAINING OPTIMAL CONDITIONS IN HOLDING TANKS AND LIVEWELLS

A long day of fishing may require a place to store your fish, especially if you are planning to keep them or if you are participating in a tournament. Holding tanks and livewells can fill that need.

Don't put too many fish in a livewell. You should hold no more than $\frac{3}{4}$ pounds of fish per gallon of water.

Provide continuous aeration, cool the water with ice when the livewell water temperature is over 80 degrees, maintain a 0.5 percent salt solution ($\frac{1}{2}$ cup non-iodized salt per 5 gallons of water), and replace half of the livewell water at least every two hours.

Don't allow water to drain from a livewell when motoring around the lake.

For more information on fish handling and release guidelines, visit short.mdc.mo.gov/Zws. ▲

Andrew Branson has been with MDC since 2005 and now works out of the headquarters in Jefferson City. He knows Missouri is a great place to fish and enjoys spending his free time doing just that.

The source material for this article comes from MDC's publication, *Handling and Releasing Fish: A guide for the angler to lessen fish stress and catch-and-release mortality*, available for free to order or download at short.mdc.mo.gov/4Hx.



A close-up, macro photograph of animal fur, likely from a beaver or similar rodent. The fur is thick and textured, with individual hairs clearly visible. The colors range from light tan to dark brown, with some areas appearing more saturated than others. The lighting is soft, highlighting the natural sheen and texture of the pelage.

Built *on* Fur

TRAPPING AND FUR TRADING — A RICH PART OF
MISSOURI'S HISTORY — MAKING A COMEBACK

by Gilbert Randolph

The Montgomery County Fairgrounds were dry, chilly, and sun beaten on the day of the Missouri Trappers Association 2024 Fur Auction. In fact, it was sunny enough that to look at the walls of the white corrugated metal building that housed the auction was painful.

Inside, there were tables lining the sides, as well as more tables set out in the middle. Piles of dried beaver pelts, whole frozen bobcats, bundles of coyote pelts, and even an albino raccoon waited to be set on a conveyor belt table that led to the auctioneer. One man brought a tub full of otter pelts to be tagged by MDC employees near one of the entrances.

To the uninitiated, the world of trapping may seem bizarre, but behind the initial impressions, you'll find a rich history, one that many are concerned is dying out.

TRAPPING HISTORY

Fur has never been a stable commodity, but, at times, it has been lucrative. St. Louis and Kansas City were practically built on the fur trade. During the height of its power, the fur trade exported its product back to Europe and other metropolitan areas for the hatting industry. Companies invested big money into fur expeditions, such as the expedition described in the novel and movie *The Revenant*, which centers around trapper and explorer Hugh Glass.

Changes in fashion and overexploitation of the resource led to a collapse in the fur economy in the U.S. and in Missouri. We entered a dark age where many of the most important furbearers, notably beavers, were nearly extirpated from the state. Some, like the river otter, wouldn't recover until the 1990s. Today, those populations have rebounded, and trapping remains an important cultural and economic practice for Missourians who enjoy the outdoors.

Trapping, while inexorably tied to the fur market, is more than a commercial trade. Ronald Pearl, a trapper out of North Kansas City, was exposed to trapping through his father, who primarily trapped raccoons and other furbearers for meat.

While the current culture and seasons around furbearers are typically set for the winter to match peak fur quality, Pearl's father

would trap raccoons and opossums for food earlier in the year and stop once winter set in.

"What he would do when he went trapping is catch stuff he could sell," Pearl said. "He sold raccoons and opossums to people to eat."

Today, Pearl has customers who seek out meat from animals that he's trapped. He also sells the hides from animals he's trapped at the fur market.

MORE THAN FUR PRICES

Participation in fur trapping has historically waxed and waned depending on fur prices, but for trappers like Pearl, the fur prices aren't what drive his desire to go through all the work of making sets, putting up fur, and bringing it to market. There's a connection to history and a level of intimacy with the land that trapping provides that very few other outdoor pursuits can match. The practice of reading signs and understanding animal behavior, which is necessary knowledge for any trapper, is something that can only be picked up in the field.

The culinary tradition around furbearers is a longstanding part of America's tradition. Furbearers and other small game played an important role in the diet of many Americans. According to a *Smithsonian Magazine* article, archeological evidence of enslaved people has found traces of them stewing animals whole, a method that reflects the culinary traditions of West Africa. Raccoon in particular has a long culinary history. The first edition of *The Joy of Cooking*, released in 1931, even had a recipe for it.

Other furbearers, such as beavers, have also played a role in American food history. Beaver, reportedly a favorite amongst trappers and mountain men for its fat, may still be a niche item for hunters, but wild game chefs like Wade Truong and Rachel Owen of the website *Elevated Wild* have helped to revive and even innovate beaver preparations. It's an open secret that beaver meat is great table fare. It can be used in stews, as shredded meat for tacos, smoked, braised, and more.

Even more unusual choices, such as bobcat, have a high culinary value and are surprisingly mild and easy to prepare. Other outdoors figures, such as Steven Rinella of the outdoors television series *MeatEater* and writer and chef Hank Shaw, have helped to popularize the good culinary reputation of furbearers and carry on this peculiarly American food culture.



Beaver Pelt Prices

Avg. Dry Pelt:
2024: \$30.50
2023: \$14.22

Avg. Wet Pelt:
2024: \$22.89
2023: \$10.79



Dry Raccoon Pelt Prices

Average:
2024: \$8.31
2023: \$2.15



Bobcat Prices

Highest:
2024: \$290
2023: \$135

Average:
2024: \$80.35
2023: \$90.53



A RESURGENCE

Until recently, it was taken for granted that trapping participation was on a steady decline. However, there seems to be an uptick, both in fur prices and trapper participation.

Trapping license sales have been on an upward trend since 2020, according to MDC Hunter and Angler Marketing Specialist Eric Edwards.

There is also significantly more access to information now about trapping than ever before. Through online and social media, particularly YouTube and Facebook, new trappers have the mentorship of seasoned trappers right at their fingertips. Being able to ask questions about gear choices, sell and trade traps, and talk about market trends online has opened a new world of exposure to trapping that previously didn't exist.

In an odd turn of history, beaver prices have also started to rebound, primarily for the hatting industry for beaver felt hats. For several years

beavers have not been worth much on the market, a significant irony given that beaver pelts were once the major driver in much of the North American fur market.

Some have anecdotally given credit to the popularity of the TV show *Yellowstone* for driving up demand for beaver felt hats again. Stetsons and other cowboy hats are likely the first thing that come to mind when someone says beaver felt hats, but beaver felt has also maintained a place in high fashion, with notable hatters such as Worth and Worth, a New York City-based designer whose hats have been worn by celebrities such as Sean Connery, David Bowie, Frank Sinatra, and others.

The last spike in fur prices, according

to the 2022 Furbearer Report and published by MDC, was in 2013–2014, which was an all-time high in fur prices between 1994 and 2022. Fur prices this year were surprisingly strong, with beaver bringing in an average price of \$30.50 for dry pelts and \$22.89 for wet pelts. Compared with average prices in 2023 of \$14.22 for dry pelts and \$10.79 for wet, the demand for beaver

took a significant jump from last year. Whether these trends continue will remain to be seen, but it's reasonable to expect that if prices remain high, we may see increased participation in trapping.

Other standouts from this year's auction include bobcats. While the average price of bobcats was slightly less than in





2023, \$80.35 compared to \$90.53 in 2023, the highest sold price for bobcats in 2024 was \$290, a significant increase from last year's highest price, which sat at \$135. Fur sale records from 2014 until now show a definitive increase in market value for bobcat pelts. Dry raccoon pelts also saw a price jump, up to an \$8.31 average as compared with an average price of \$2.15 last year.

"The results (prices) at the auction were better than expected with most species up in price," said Tom Westhoff, delegate for the Missouri Trappers Association to the Conservation Federation of Missouri. "This is due to several factors including the backlog of fur finally being used up. With the low prices the last five years, trappers have reduced their efforts, which resulted in fewer furbearers being harvested. As the backlog is getting used up, manufacturers want fresh goods. Fashion has also dictated a price increase, especially for beaver. Beaver felt cowboy style hats are in demand

and manufacturers need more beaver fur to make the hats. While the overseas demand is still reduced, the people of Russia, Ukraine, China, and other countries still want our fur, but government sanctions have stopped most of the international trade. There is still a demand from a few other countries for some species, including bobcats."

Westhoff also emphasized the importance of trappers maintaining a voice in Missouri through membership with the Missouri Trappers Association and participating on proposed regulatory changes regarding furbearers. The Missouri Trappers Association, through the fur sale and other work done throughout the state, has been a major factor in keeping trapping culture alive.

If you want to learn more about trapping or connect with other trappers, visit the Missouri Trappers Association online at missouritrappers.com. MDC also offers online resources on

Whether it's foxes, coyotes, skunks, or beavers, there's a little bit of everything at the Missouri Fur Auction. The Missouri Trappers Association also hosts a yearly trappers rendezvous with workshops, vendors, and the opportunity to meet other trappers from around the state.

how to get started trapping, including gear recommendations and the necessary regulations that you need to know before pursuing furbearers. To learn more, visit short.mdc.mo.gov/Zvx. ▲

Gilbert Randolph is a writer and an avid outdoorsman. When he's not creating stories in the digital space, he's exploring nature and sharing it with people.

A full-page background image showing a sunset or sunrise over a body of water. The sky is a vibrant orange and yellow, with the sun low on the horizon. Silhouettes of trees are visible against the bright sky. The water in the foreground reflects the warm colors of the sky.

THE SOGGY SIDE

NOPPADOL PAOTHONG



LIFE SQUISHES
OUT FROM EVERY
SATURATED CORNER
OF MISSOURI'S
WETLANDS
by Matt Seek

Acre for acre, Missouri's wetlands rival any place on the planet in the amount of life they produce. Nearly half of the state's 3,200 plant species are associated with wetlands, and more than a third of Missouri's birds depend on wetlands for some part of their life cycle. Shallow wetland pools act as nurseries for the offspring of many amphibians and fish. The state's most important furbearers — beavers, muskrats, mink, and otters — depend on wetlands for food and shelter. When compared to the Show-Me State's wetlands, only tropical rainforests and

coastal salt marshes produce more life per square yard.

But most Missourians miss all of it. And that's a shame. Visiting a wetland, especially when spring migration is in full swing, offers the chance to witness wildlife spectacles that challenge anything you might see on the Discovery Channel.

Consider this article as both an invitation and a tour guide for visiting a marsh. Although entire books have been written about wetland wildlife, here we hit the highlights of what you might find on a visit to Missouri's most productive habitat.



SHOW-ME WETLANDS

When Charles Dickens visited America in 1842, he described the vast riverine wetlands surrounding St. Louis as “stagnant, slimy, rotten, filthy water,” and he called the area a “thoroughly distasteful and unhealthy place.”

Other folks saw wetlands not as wretched wastelands, but as wasted opportunities. They drained off the turbid water, plowed under the cordgrass and bulrushes, and used the rich soils to grow crops to feed an expanding nation.

Today, over 85 percent of Missouri’s original marshes and swamps are gone. But opportunities to visit high-quality wetlands remain in nearly every corner of the state (See *Wandering Missouri’s Wetlands*, Page 26).

SOMETHING IN THE AIR

You may notice a faint odor when you visit a wetland. The reason why is simple — marsh bottoms pass gas. A handful of oozy muck contains billions of bacteria and other microscopic creatures. These microbes make their living breaking down dead plants and animals. Most decomposers need oxygen to do their jobs. But wetland soils are often saturated, creating conditions where oxygen is in short supply. Luckily, some marsh microbes decompose organic matter using anaerobic chemical pathways. A byproduct of these reactions is hydrogen sulfide — also known as swamp gas — which has the unfortunate bouquet of a forgotten Easter egg rediscovered in June. If you waded through a wetland, you’ll notice clouds of tiny bubbles rising to the surface with each step, a miasma of microbial flatulence freed from the muck by your footsteps.

Since wetland soils stay soggy, wetland plants have evolved tissues that transport air from the atmosphere down to their waterlogged roots. If you were to cut a cattail or bulrush leaf in cross section, you’d see a network of tiny tubes. These are called aerenchyma, and they act like snorkels to passively move air from areas of high concentration (above the water’s surface) to low concentration (the plant’s roots).



Pied-billed grebe

Double-crested cormorants

DRYING OUT AND DIVING DOWN

Double-crested cormorants produce less oil than other waterbirds. When they dive for fish, their feathers eventually get soaked. Look for cormorants standing on stumps, holding their waterlogged wings out to dry.

Wet feathers are much less an issue for the pied-billed grebe. When a grebe gets spooked, it sinks underwater like a feathered submarine. Watch closely. The sneaky bird will resurface a little bit later when it thinks the coast is clear.

Much less concerned about being seen — and much more likely to be seen now than in decades past — is the bald eagle. Missouri’s wetlands provide eagles with open water and access to fish and waterfowl. Newly paired eagles build relatively small nests. Each year, the couple — which often remain together for life — add additional sticks to the existing structure. After several years, the nest can grow to gargantuan proportions. A nest in Ohio, for example, was used for 34 years until the tree it was in collapsed from the weight, which was estimated to be over 2,000 pounds.



American white pelicans

PELICAN PARTY

Weighing up to 30 pounds and with a 9-foot wingspan, a full-grown American white pelican is one of the largest birds in North America. If you spot a flock, it pays to spend some time watching their behavior.

White pelicans are one of the few birds that engage in cooperative hunting. Teams of pelicans paddle in a line, splashing water with their wings. Frightened fish swim away from the commotion — right into a trap. Once the pelicans herd the fish into the shallows or encircle the entire school, the hungry birds dip them up with their enormous, pterodactyl-like beaks as easily as if the fish were swimming in a soup bowl.

You may notice a round plate or “horn” on top of a pelican’s beak. Both males and females sprout these during mating season. They fall off at the end of summer and aren’t seen when the birds pass through Missouri during fall migration.

HUNTING HERONS AND HIDE AND SEEK

Herons and egrets have various tactics to catch dinner. Sometimes they wade slowly through shallow water, hoping to ambush unwary fish, frogs, and snakes. At other times, they stand motionless and wait for prey to swim within range of their long, flexible necks and dagger-like beaks. Green herons have been observed luring fish into striking range by dropping feathers or food into the water as bait.

If nature played hide-and-seek, American bitterns would win. To escape notice, the brown-streaked birds freeze and point their beaks skyward, virtually disappearing into the surrounding cattails and rushes. Spotting a bittern requires luck and determination. You have a better chance of hearing one, especially if you arrive at a wetland around dawn. Their call — a booming *unk-a-lunk* — can be heard half a mile away.



American bittern

Great blue heron

Great egret

Green heron

A RAINBOW OF WATERFOWL

Like many birds, male and female ducks rarely look alike. Drakes have bright, colorful feathers to attract a mate. Hens have elegant but understated colors to help them stay hidden while they're sitting on a nest. To illustrate the breadth of colors, males in breeding plumage are shown here.

MALLARD

Mallards are the most common duck in North America. Nearly all farm-raised ducks can trace their ancestry to this widespread waterfowl.



BLUE-WINGED TEAL

These small, sun-loving ducks migrate later than other ducks. On their way north, they linger in Missouri well into May.



NORTHERN PINTAIL

Some pintails take travel to the extreme. One was recorded to have flown 1,800 miles nonstop.



CANVASBACK

These regal ducks are among the fastest of flyers. With a strong tailwind, they can reach speeds over 70 mph.



SCAUP

Two kinds of scaup visit Missouri: greater scaup and lesser scaup. Good luck telling them apart! They look nearly identical.



GREEN-WINGED TEAL

Stretching only a foot from beak to tail and weighing only as much as a soup can, this dapper duck is North America's smallest dabbling.



NORTHERN SHOVELER

Comblike ridges line the edges of this duck's impressive beak. The ridges work like a spaghetti strainer, letting water pour out but trapping food inside.



COMMON MERGANSER

Toothlike ridges on a merganser's bill help it hold on to slippery fish, their favored food.



GADWALL

Gadwalls are often seen away from the shoreline, feeding in deeper water than other dabbling ducks.



AMERICAN WIGEON

Wigeons eat more veggies compared to other ducks. Because their bills are so stubby, they can pinch harder, which makes it easier to pluck plants.



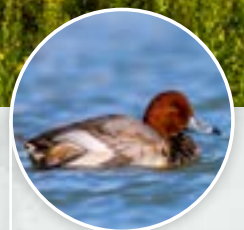
HOODED MERGANSER

Female mergansers often sneak an egg or two into the nests of other hens. Some nests have been found with over 40 eggs inside.



RING-NECKED DUCK

Although they dive to find food, ring-necked ducks are often found in shallower water than most diving ducks.



REDHEAD

To attract a mate, redhead drakes bend backwards until their beaks touch their tails. Then they snap forward while giving a catlike *mee-ooow*.

ONE BIG, HONKING BLIZZARD

Missouri is the halfway point on the Mississippi Flyway, a busy thoroughfare in the sky that ducks, geese, and other waterbirds follow to get from northern nesting grounds to southern wintering areas. Travel-weary birds gather in Missouri's marshes to rest and refuel on their long journeys.

Among those using Missouri's wetlands as migration stations are snow geese. Biologists estimate that the mid-continent population of snow geese ranges from 11 million to 18 million birds. Flocks containing well over 100,000 individuals are regularly seen in Missouri, and flocks of over

a million have been counted at Loess Bluffs National Wildlife Refuge in northwest Missouri.

Traveling en masse is an effective survival strategy. The more geese in a group, the more eyes there are to keep watch while flockmates feed. If a lookout spots a predator — or an inquisitive human — it honks an alarm, and the whole flock erupts into flight like an upside-down snowstorm.

If you're lucky enough to see such a spectacle, you may notice that not all snow geese are snow-white. Until 1983, the dark morphs, which have grayish-brown bodies and white heads, were thought to be a separate species.



WOOD DUCK

Wood ducks nest in holes high up in trees. A day after hatching, the ducklings follow mom to the entrance of the hole and jump out.



COMMON GOLDENEYE

When goldeneye ducklings hatch, their eyes are brown. Over several months, they turn purple, then blue, then green, and — finally — golden.



BUFFLEHEAD

Chunky but tiny, female buffleheads nest in abandoned woodpecker holes that other ducks can't fit into.

DUCK DESIGNS

Biologists divide ducks into two basic groups: dabblers and divers. You can tell which group a duck's in by the way it looks, flies, and feeds.

Dabblers

- Legs near the middle of the body make it easy for a dabbler to waddle around.
- Large wings allow a dabbler to burst from the water.
- A dabbler skims seeds and insects off the water's surface. It also tips its head underwater to grab deeper grub.

Divers

- Legs that are far back on the body help a diver swim underwater but make it awkward on land.
- Skinnier wings cause a diver to pitter-patter across the water's surface to get airborne.
- Divers — as the name suggests — dive underwater to nab fish or pluck up plant roots.

MARSH MAMMALS

Most mammals come out after dark, so you aren't likely to see many in the flesh and fur. But footprints left on muddy banks offer clues of their presence. With a good field guide, it's easy to identify the tracks of common wetland denizens like raccoons, otters, and mink. If you're lucky, you may even find more permanent signs left behind by two of Missouri's most industrious mammals: beaver and muskrat.

Tree stumps that look like they've been run through a pencil sharpener indicate the efforts of the Show-Me State's largest rodent. Using only its

incisors, an American beaver can drop a willow tree that's thicker than your leg in under 5 minutes. The buck-toothed builders gnaw on trees for food and use the branches to build dens and dams.

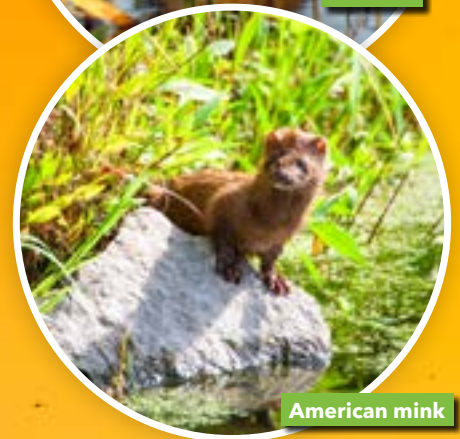
Musk rats, the beaver's pint-sized cousins, mow down patches of aquatic plants, bite by bite. This creates areas of open water where fish, frogs, and turtles can swim, herons can wade, and ducks can land. Uneaten leaves and stems are used by the furry "marsh-chitects" to construct mound-shaped dens and feeding platforms. Look for 4-foot-high heaps of mud-spackled vegetation dotting the marsh.



Muskrat den



Muskrat



American mink



American beaver

Wandering Missouri's Wetlands

While most of Missouri's original wetland acreage has been lost, the state's patchwork of wetlands in conservation areas and National Wildlife Refuges provides species with the food and shelter needed for survival. Most Missourians are a relatively short drive from a wetland.

To protect migrating waterfowl, portions of some conservation areas may be closed to the public from fall through early spring. Before you go, it's smart to review the specific area's policies in MDC's online atlas at mdc.mo.gov/atlas.

WHEN TO GO

Spring is a fantastic time to visit a wetland. In March, ducks and geese flock to wetlands on the northward leg of their annual migration. In April, pelicans pass through, and a variety of herons and other long-legged waders arrive. In May, shorebirds skitter across mudflats, while willows and cottonwoods drip with warblers and other colorful songbirds.

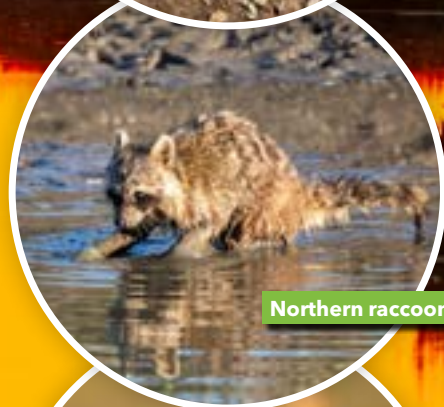


WHAT TO BRING

- A pair of binoculars brings distant critters in for a closer look.
- Birds, bugs, and blooms abound in wetlands. Field guides help you learn what you're looking at.
- Wetlands are wet (obviously!) and muddy. If you plan to explore outside your vehicle — which you should — wear a pair of waterproof boots.
- Mosquitoes love marshes. Keep the bloodsuckers at bay with insect repellent.
- If you're bringing kids along, a mesh aquarium net will strain up squiggly, captivating creepy-crawlies that lurk in wetland water.



Raccoon tracks



Northern raccoon



North American river otter



Spring peeper



American toad



Boreal chorus frog

SPRING SYMPHONY

Far from being silent and serene, a cacophony of sounds ricochets around a wetland. If you listen closely, you'll hear spring in full swing as a chorus of amphibian love songs overflows each shallow pool.

The spring peeper's *peep, peep, peep* (like the ping made by striking the high note on a xylophone) harmonizes with the chorus frog's *crrreeeeeeeep* (similar to the sound made by running your fingernail over the teeth of a comb) and the American toad's *brrreeeeeeeee* (a high-pitched, musical, drawn-out trill) to provide a natural, musical tour de force.

NOT 'DISTASTEFUL AND UNHEALTHY' AT ALL

Missouri's wetlands ooze life from every soggy nook and cranny. They play a vital role in the continued well-being for wildlife throughout Missouri and large swathes of North America. Charles Dickens may have thought them "distasteful and unhealthy" at first glance, but with a little perspective, he may have realized that visiting Missouri's wetlands are among the best of times. ▲

Matt Seek is the editor of Xplor, MDC's magazine for kids. A version of this article appeared in the March-April 2024 issue of Xplor. Matt grew up on Fountain Grove Conservation Area, an 8,000-acre wetland.

Missouri's wetlands exist within the 10 million acres of bottomland that occurs across the state.

1. Loess Bluffs National Wildlife Refuge
2. Nodaway Valley Conservation Area
3. Bob Brown Conservation Area
4. Fountain Grove Conservation Area
5. Swan Lake National Wildlife Refuge
6. Grand Pass Conservation Area
7. Ted Shanks Conservation Area
8. B.K. Leach Conservation Area
9. Marais Temps Clair Conservation Area
10. Columbia Bottom Conservation Area
11. Eagle Bluffs Conservation Area
12. Montrose Conservation Area
13. Four Rivers Conservation Area
14. Schell-Osage Conservation Area
15. Duck Creek Conservation Area
16. Mingo National Wildlife Refuge
17. Otter Slough Conservation Area
18. Ten Mile Pond Conservation Area



Get Outside

in FEBRUARY



Woodchuck

→ Ways to connect with nature

Eastern tiger salamander



Sweetheart Salamanders

February is a month known for sweethearts, and that extends to the animal community, too.

During autumn rains, **eastern tiger salamanders** migrate to fishless ponds. Courtship and egg-laying occur in these waters in February, peaking in March. Each female may lay up to 1,000 eggs deposited in small clumps of 23-110. Eggs hatch within several weeks, or up to 40-50 days if water temperatures are cold.

The eastern tiger salamander is listed as a species of conservation concern due to loss and fragmentation of native prairies and savanna habitat, loss of wetlands, and patchy distribution. Constructing and maintaining shallow, fishless wetlands for breeding is vital to the long-term survival of this species in Missouri.

VIRTUAL

LEARNING TO HUNT: Small Game

Saturday • Feb. 22
9-11 a.m.
Online only
Registration required by Feb. 22. To register, call 888-283-0364 or visit short.mdc.mo.gov/4rs. All ages

Join us as we discuss the nuances of small game hunting. We will go over techniques for squirrel and rabbits, but we will discuss various animals in the small game category. The link to join this class will be sent the morning of the class.

Woodchuck the Weather Forecaster?

Woodchucks, also known as groundhogs, start to emerge from hibernation in Missouri as early as the first week of February, but severe cold weather may delay them. At first, they come out only for short periods because little food is available, but as the daily temperatures rise and green growth increases, they spend more time aboveground. Feb. 2 is also Groundhog Day. Today's legend says if the groundhog sees its shadow, we'll see six more weeks of winter. No shadow means an early spring.



Female and male yellow-bellied sapsuckers

Let's Get Sappy

Sugar maple trees can be tapped for delicious syrup to be used on pancakes and waffles. But humans are not the only ones that enjoy this sweet nectar.

In late winter and early spring, **yellow-bellied sapsuckers** drill small holes through the bark of trees, then drink the sap that flows out of the hole.

Natural Events to See This Month

Here's what's going on in the natural world.



Dark-eyed juncos migrate north to breed.



Raccoons breed in February.



Spring peepers start calling.

CENTRAL REGION

Missouri Trappers 2025 Fur Auction

Saturday • Feb. 22 • 7:30 a.m.

Montgomery County Fairgrounds, 700 S. Sturgeon St., Montgomery City, MO 63361

Registration is not required. For more information, call Jim Love, auction chairman, at 636-359-2203 or visit missouritrappers.com/fur-auction.

All ages

The Missouri Trappers Association will hold its annual fur auction featuring both green and finished fur. Everyone is welcome to attend, even if you are not selling fur. To get a complete set of rules, visit the website above or call Jim Love.

A Bounty of Berries

From the time acorns and other mast items first become available in September until they are gone, they are preferred by deer for food. In years of poor acorn production, and as a supplement in years of good acorn crops, deer in fall and winter feed on the fruits of woody plants like sumacs and **buckbrush**. The fruit of buckbrush, also known as coral berry, is not a favorite for most animals, but as they get more desperate, the fruit becomes more palatable.

These berries also provide a service to mammals of the human variety — they offer a welcome spark of color to nature's otherwise drab palette during the waning days of winter.



Buckbrush



Harbinger of spring is one of Missouri's earliest blooming wildflowers.



Grass pickerel spawn in late February.

Conservation Nature Centers



BURR OAK WOODS

Blue Springs | mdc.mo.gov/BurrOakWoods

CAPE GIRARDEAU

Cape Girardeau | mdc.mo.gov/Capecnc

DISCOVERY CENTER

Kansas City | mdc.mo.gov/DiscoveryCenter

POWDER VALLEY

Kirkwood | mdc.mo.gov/PowderValley

RUNGE

Jefferson City | mdc.mo.gov/Runge

SHOAL CREEK

Joplin | mdc.mo.gov/ShoalCreek

SPRINGFIELD

Springfield | mdc.mo.gov/Springfieldcnc

TWIN PINES

Winona | mdc.mo.gov/TwinPines

Discover nature with us.

Places to Go

NORTHWEST REGION

Fountain Grove Conservation Area

Goose, goose, duck

by Larry Archer

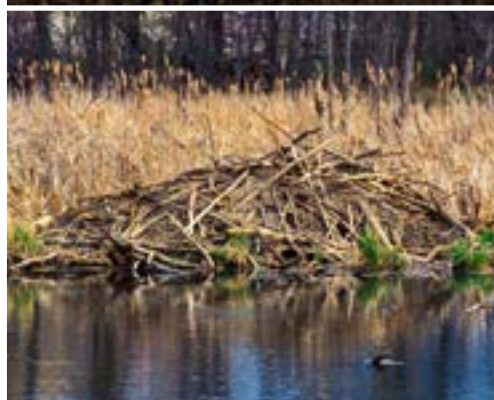
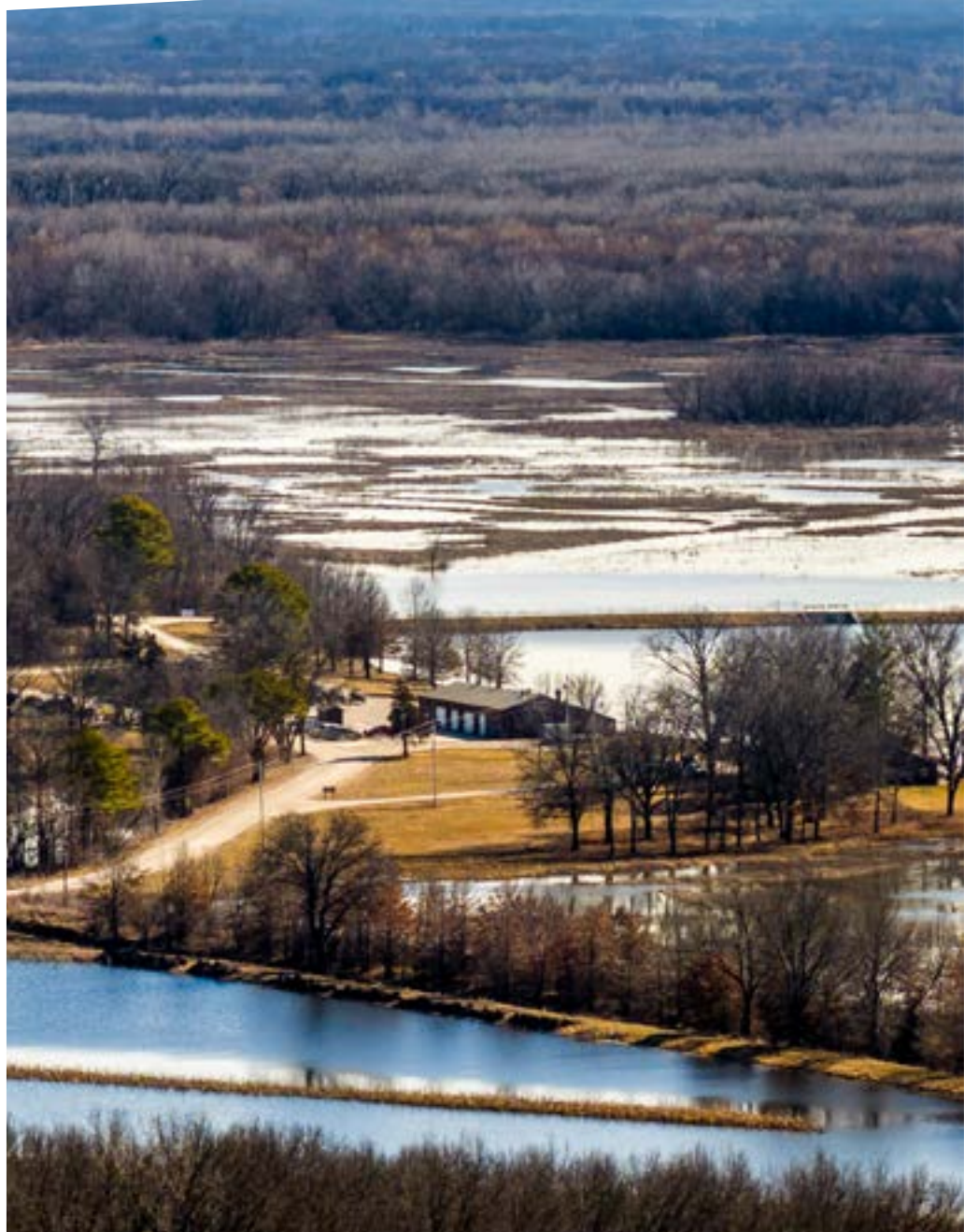
✧ If Fountain Grove Conservation Area (CA) was a children's game, it would likely be a variation of Duck, Duck, Goose that would more accurately be called Goose, Goose, Duck.

"It's February, and that's the peak time for the return migration for most waterfowl species, the snows, the specs — or white-fronted geese — and Canada geese," said MDC Wildlife Biologist Bryan Anderson. "And most of the puddle ducks are moving back north during February — the mallard, pintail, gadwall, wigeon."

Located on over 8,000 acres in Linn and Livingston counties, Fountain Grove CA is Missouri's largest and oldest managed wetlands. Combined with nearby Swan Lake National Wildlife Refuge, the area draws both waterfowl and waterfowl hunters, Anderson said.

"February is just a popular goose hunting month in this area, between the snow geese, the Canadas, and the specs," he said. "We hold more than just about any place in the state on those species, and we get several folks that come and hunt Fountain Grove."

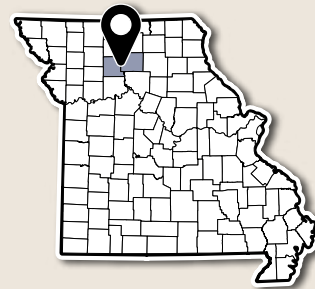
Because of restrictions on places open for non-hunting use during waterfowl seasons, Anderson recommends birdwatchers and nature viewers hold off until the close of waterfowl seasons and the refuge openings to the public on March 2.



"We're surrounded by the Grand River on the south, Locust Creek on the east, and Parsons Creek on the west, and our floodplain is in the middle of all that, so beaver are really common."

—MDC Wildlife Biologist
Bryan Anderson

DAVID STONNER









FOUNTAIN GROVE CONSERVATION AREA

consists of 7,991.8 acres in Linn and Livingston counties. At Meadville exit of US 36, take Route W south 5 miles, then Blackhorn Drive south 0.75 mile to the area headquarters.

39.7108, -93.3066

short.mdc.mo.gov/4kH 660-646-6122

WHAT TO DO WHEN YOU VISIT

-  **Bicycling** Improved and service roads totaling 45.5 miles open to bicycling year-round.
-  **Birdwatching** Included in the National Audubon Society's Lower Grand River Wetlands Important Bird Area (short.mdc.mo.gov/4Kj). The eBird list of birds recorded at Fountain Grove CA is available at short.mdc.mo.gov/4Ky.
-  **Camping** Individual campsites.
-  **Fishing** Che-Ru Lake (160 acres), Jo Shelby Lake (30 acres), 10 fishing ponds totaling 36 acres. Black bass, catfish, crappie, sunfish, white bass.
-  **Hunting Deer and turkey.** Regulations are subject to annual changes. Refer to MDC's regulation page online at short.mdc.mo.gov/Zjw.
Also **dove, quail, rabbit, and squirrel.**
-  **Trapping** Special use permit required.
-  **Waterfowl Hunting** Regulations are subject to annual changes. Refer to MDC's *Migratory Bird and Waterfowl Hunting Digest* online at short.mdc.mo.gov/4SZ for details.

WHAT TO LOOK FOR WHEN YOU VISIT



North American river otter



Bald eagle



Snow goose



American wigeon



Woodchuck (Groundhog)

Marmota monax

Status
Common

Size
Length: 16-27 inches; weight: 4-14 pounds

Distribution
Statewide



Much like squirrels, a close family member, woodchucks, or groundhogs, are common Missouri rodents. Woodchucks have short, powerful legs and a medium-long, bushy, but somewhat flattened tail. They are known to emit a loud, shrill whistle when alarmed, contributing to their nickname, whistle pig.



LIFE CYCLE

Woodchucks hibernate from late October to sometime in February when they emerge to breed. After approximately 33 days of gestation, a single, annual litter of two to nine young arrives toward the end of March. By midsummer, the young weigh about 4 pounds and may dig temporary burrows before moving farther away to establish their own homes. The lifespan is usually only 2 or 3 years in the wild.



FOODS

Woodchucks are almost completely vegetarians, eating leaves, flowers, and soft stems of various grasses; field crops such as clover and alfalfa; many kinds of wild herbs; and garden crops like peas, beans, and corn. They occasionally climb trees to obtain apples and pawpaws.



HUMAN CONNECTIONS

As one of the few large mammals active in daylight, many people enjoy seeing them. Today, Feb. 2 is the well-known date for Groundhog Day, when groundhogs supposedly emerge from their dens and either "see their shadows" or not. If it's sunny, the groundhog supposedly sees its shadow and returns to its burrow to continue hibernation, knowing there will be six more weeks of winter. But if it's cloudy, then winter weather is over, and it's safe for people to begin plowing and planting.

Outdoor Calendar

❖ MISSOURI DEPARTMENT OF CONSERVATION ❖

For complete information about seasons, limits, methods, and restrictions, consult the *Wildlife Code of Missouri* at short.mdc.mo.gov/Zib. Current hunting, trapping, and fishing regulation booklets are available from local permit vendors or online at short.mdc.mo.gov/ZZf.

FISHING

Black Bass

Impounded waters and non-Ozark streams:
Open all year

Most streams south of the Missouri River:

- ▶ Catch-and-Release:
March 1–May 23, 2025
- ▶ Catch-and-Keep:
May 24, 2025–Feb. 28, 2026

Nongame Fish Giggling

Impounded waters, sunrise to sunset:
Feb. 16–Sept. 14, 2025

Streams and impounded waters,
sunrise to midnight:
Sept. 15, 2024–Feb. 15, 2025

Paddlefish

Statewide:
March 15–April 30, 2025

On the Mississippi River:
March 15–May 15, 2025
Sept. 15–Dec. 15, 2025

Trout Parks

During the catch-and-release season,
state trout parks (except Maramec Spring
Park) are open only Friday–Monday.

Catch-and-Keep:
March 1–Oct. 31, 2025

Catch-and-Release:
Nov. 8, 2024–Feb. 10, 2025

Free MO Hunting and MO Fishing Apps

MO Hunting makes it easy to view permits, electronically notch them, and Telecheck your harvest. MO Fishing lets you view permits, find great places to fish, and ID your catch. Get both in Android or iPhone platforms at short.mdc.mo.gov/Zi2.



HUNTING

Bobcat, Opossum, Raccoon, Striped Skunk

Nov. 15, 2024–Feb. 28, 2025

Coyote

Restrictions apply during April, spring turkey
season, and firearms deer season.

Open all year

Crows

Nov. 1, 2024–March 3, 2025

Deer

Archery:
Sept. 15–Nov. 14, 2025
Nov. 26, 2025–Jan. 15, 2026

Firearms:

- ▶ Early Antlerless Portion
(open areas only):
Oct. 10–12, 2025
- ▶ Early Youth Portion (ages 6–15):
Nov. 1–2, 2025
- ▶ November Portion:
Nov. 15–25, 2025
- ▶ CWD Portion
(open areas only):
Nov. 26–30, 2025
- ▶ Late Youth Portion (ages 6–15):
Nov. 28–30, 2025
- ▶ Late Antlerless Portion
(open areas only):
Dec. 6–14, 2025
- ▶ Alternative Methods Portion:
Dec. 27, 2025–Jan. 6, 2026

Rabbits

Oct. 1, 2024–Feb 15, 2025

Squirrels

May 25, 2024–Feb. 15, 2025

Turkey

Spring:

- ▶ Youth (ages 6–15):
April 12–13, 2025
- ▶ Spring:
April 21–May 11, 2025

Fall:

- ▶ Archery:
Sept. 15–Nov. 14, 2025
Nov. 26, 2025–Jan. 15, 2026
- ▶ Firearms:
Oct. 1–31, 2025

Waterfowl

See the Migratory Bird and Waterfowl Hunting Digest
or visit short.mdc.mo.gov/ZZx for more information.

TRAPPING

Beaver, Nutria

Nov. 15, 2024–March 31, 2025

Bobcat, Coyote, Mink, Muskrat, Opossum, Raccoon, River Otter, Striped Skunk

Nov. 15, 2024–Feb. 28, 2025

Special Trapping Season for Private Lands Only: Coyote, Opossum, Raccoon, Striped Skunk

March 1–April 14, 2025

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on Instagram**

@moconservation

Don't let the remaining days of winter pass you by. Missouri's outdoors are open year-round — throughout every season and temperature — and adventure awaits. Whether you enjoy hiking, fishing, or even kayaking on the Missouri River, the opportunities abound. So, get out there! What will you discover?

📷 by **David Stonner**

Free to Missouri households

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